

Recombinant human IL-34 PLUS™ protein (Qk091)



Type: Stem cells

Available for purchase: Unit size (µg): 25, 50, 100, 500, 1000

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Product Information

Interleukin-34 (IL-34) is a cytokine involved in regulating the differentiation, survival, and activation of monocytes, macrophages, and osteoclasts. IL-34 plays a key role for the development and maintenance of tissue-resident macrophages such as Langerhans cells in the skin and microglia in the brain. Recombinant IL-34 can be used in the differentiation of induced pluripotent stem cells (iPSC) to microglia.

Qkine have optimized the sequence and manufacture of IL-34 PLUS™ to produce a highly and consistently bioactive protein (patent pending GB 2514413.0). Qk091 has a molecular weight of 25 kDa as a monomer and is supplied as a non-covalent dimer, highly pure, [animal origin-free](#), tag free and carrier free for reproducible microglial differentiation and immune cell culture.

This protein is also available as GMP compliant [Cell Therapy Grade](#), to enquire email support@qkine.com.

Alternative protein names

IL34, Interleukin 34, Interleukin-34, MGC34647, C16orf77, Qk91

Molecular weight

25 kDa (monomer)

Protein Uniprot number

High purity optimized human IL-34 protein (Uniprot: Q6ZMJ4)

Species reactivity

- human
- species similarity:
- mouse - 71%
- rat - 72%
- bovine - 78%
- porcine - 75%

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Animal origin-free (AOF) and carrier protein-free
- Expressed in *E. coli*
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in sterile-filtered water at >50 µg/ml

Featured applications

- Polarization of anti-inflammatory or M2 macrophage
- Generation of iPSC-derived microglia and Langerhans cells
- Osteoclast culture to study osteoporosis and bone disorders

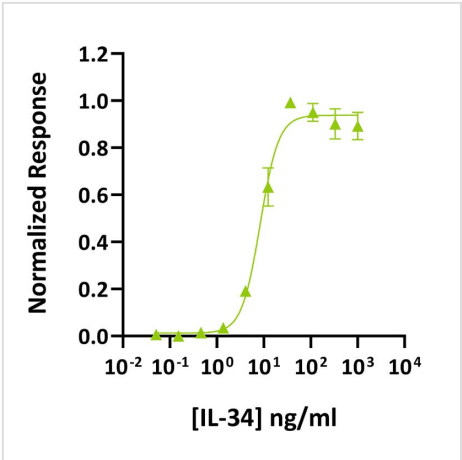
Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

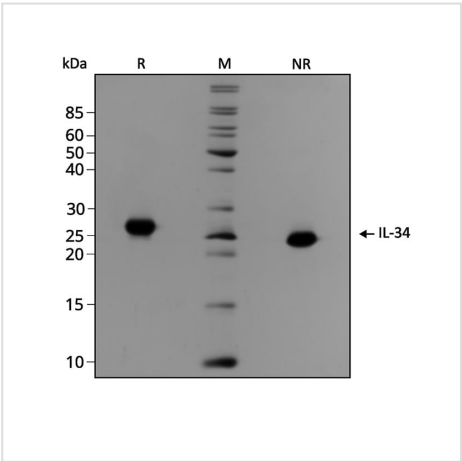
Bioactivity

Recombinant IL-34 PLUS™ activity was determined using an SRE reporter assay in HEK293 cells co-transfected with the CSF1R receptor. Transfected HEK293 cells were treated in triplicate with a serial dilution of IL-34 for 3 hours. Firefly activity was measured and normalized to the control Renilla luciferase activity. Data from Qk091 lot #204768. EC50 = 8.4 ng/ml (0.33 nM).



Purity

Recombinant IL-34 PLUS™ migrates as a major band at approximately 27 kDa (monomer) in reduced (R) and at approximately 25 kDa in non-reduced (NR) conditions. No contaminating protein bands are present. The purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk091 lot #204768.



Original product page: <https://qkine.com/product/recombinant-human-il-34-plus-protein-qk091/>

PDF generated: 9 May 2026

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